CLAIMS

We claim:

1. A method for bonding a first and a second optical parts, the method comprising:

   positioning the first optical part from a substrate by a small gap;

   after the first optical part is aligned with the second optical part,

   sliding two wedges respectively towards the first optical part from two directions till respective contacts with the first optical part are established;

   applying a small amount of bonding agent to the respective contacts to secure positions of the first optical part with respect to the substrate.

2. The method of Claim 1 further comprising fastening the wedges to the substrate so as to form a whole optical device or part of an optical device.

3. The method of Claim 2, wherein each of the wedges has a cross-section shaped substantially like a right triangle having a hypotenuse thereof.

4. The method of Claim 3, wherein the sliding of the two wedges respectively towards the first optical part from the two directions comprises facing down a sliding side of each of the wedges, wherein the sliding side includes the hypotenuse; and pushing each of the wedges slowly towards the first optical part.

5. The method of Claim 3, wherein each of the wedges is so shaped that the sliding of the two wedges respectively towards the first optical part from the two directions will not flip over or up the first optical part that has been already aligned with the second optical part.

6. The method of Claim 5, wherein the first optical part is an optical collimator.

7. The method of Claim 1, wherein the two directions are so decided that the two wedges, after slid in, can hold up positions of the first optical part.

8. A method for bonding a first and a second optical parts, the method comprising:

positioning the first and the second optical parts from a substrate by a small gap;

after the first and the second optical parts are aligned with each other, sliding two wedges respectively towards each of the first and the second optical parts from two directions till respective contacts with the each of the first and the second optical parts are established; and

applying a small amount of bonding agent to the respective contacts to fasten respective positions of the first and the second optical parts.

9. The method of Claim 8 further comprising fastening the two wedges for each of the first and the second optical parts to the substrate.

10. The method of Claim 9, wherein each of the wedges has a cross-section shaped substantially like a right triangle having a hypotenuse thereof so that each of the wedges has a sliding side on the hypotenuse.

11. The method of Claim 9, wherein the sliding of the two wedges respectively towards each of the first and the second optical parts from two directions comprises facing down the sliding side of each of the wedges; and pushing each of the wedges slowly towards the each of the first and the second optical parts.

12. The method of Claim 8, wherein each of the wedges is so shaped that the sliding of the two wedges respectively towards each of the first and the second optical parts will not flip over or up the each of the first and the second optical parts that has been already aligned, when being pushed to slide in.

13. The method of Claim 12, wherein each of the wedges has a cross-section shaped substantially like a right triangle.

14. The method of Claim 8, wherein the two directions are so decided that the two wedges, after slid in, can hold up positions of the each of the first and the second optical parts.

15. An optical apparatus comprising:

a first and a second optical parts, both aligned with each other to ensure that optical signals can pass through as desired;

two wedges respectively slid in from two different directions and stationed to hold up positions of the first optical part when a bonding agent is applied to contacts between the first optical part and the two respective wedges; and

a substrate supporting the two wedges by bonding the two wedges thereto.

16. The optical apparatus of Claim 15, wherein each of the wedges has a cross-section shaped substantially like a right triangle having a hypotenuse thereof so that each of the wedges has a sliding side on the hypotenuse.

17. The optical apparatus of Claim 16, wherein each of the two wedges has the sliding side facing the substrate.

18. The optical apparatus of Claim 15, wherein the two directions are so decided that the two wedges, after slid in, can hold up positions of the first optical part.

19. The optical apparatus of Claim 15, wherein the wedges are not identical and one of the wedges is integrated with another part in the optical apparatus.

20. The optical apparatus of Claim 15, wherein the first optical part is a collimator.